

What is claimed is:

1. A method for identifying one or more candidate compounds as a modulator of a G protein-coupled receptor, wherein said receptor comprises the amino acid sequence of SEQ ID NO:82, comprising the steps of:

- 5           (a)     contacting said one or more compounds with a host cell or with membrane of a host cell that expresses said receptor; and
- (b)     measuring the ability of the compound or compounds to inhibit or stimulate functionality of said receptor.

10    2.     The method of claim 1 wherein said host cell comprises an expression vector, said expression vector comprising a polynucleotide encoding a G protein-coupled receptor comprising the amino acid sequence of SEQ ID NO:82.

15    3.     A method for identifying one or more candidate compounds as a modulator of inflammation, comprising the steps of:

- (a)     contacting said one or more compounds with a host cell or with membrane of a host cell that expresses a G protein-coupled receptor, wherein said receptor comprises the amino acid sequence of SEQ ID NO:82; and
- 20           (b)     measuring the ability of the compound or compounds to inhibit or stimulate functionality of said receptor.

25    4.     The method of claim 3 wherein said host cell comprises an expression vector, said expression vector comprising a polynucleotide encoding a G protein-coupled receptor comprising the amino acid sequence of SEQ ID NO:82.

5.     A method for identifying one or more candidate compounds as a modulator of a G protein-coupled receptor, comprising the steps of:

- (a)     providing a host cell or membrane from a host cell that expresses a GPCR Fusion Protein, said GPCR Fusion Protein comprising:
- 30               (i)     said G protein-coupled receptor, wherein said receptor comprises the amino acid sequence of SEQ ID NO:82; and
- (ii)     a G protein;

(b) contacting one or more candidate compounds with said host cell or said membrane; and

(c) measuring the ability of the compound or compounds to inhibit or stimulate functionality of said receptor.

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6. The method of claim 5 wherein said G protein is Gs $\alpha$ .

7. The method of claim 5 wherein said host cell comprises an expression vector, said expression vector comprising a polynucleotide, said polynucleotide encoding a GPCR Fusion Protein, said GPCR Fusion Protein comprising:

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(a) a G protein-coupled receptor, wherein said receptor comprises the amino acid sequence of SEQ ID NO:82; and

(b) a G protein.

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8. The method of claim 7 wherein said G protein is Gs $\alpha$ .

9. A compound identified according to the method of any one of claims 1-8.

10. A compound of claim 9 wherein said compound is selected from the group consisting of agonist, partial agonist, antagonist, and inverse agonist.

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11. A pharmaceutical composition comprising the compound of claim 9.

12. The pharmaceutical composition of claim 11 wherein said compound is selected from the group consisting of agonist, partial agonist, antagonist, and inverse agonist.

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13. A method of modulating the activity of a G protein-coupled receptor, said receptor comprising the amino acid sequence of SEQ ID NO:82, comprising the step of contacting said receptor with the compound of claim 9.

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14. The method of claim 13 wherein said compound is selected from the group consisting of agonist, partial agonist, antagonist, and inverse agonist.

15. The method of claim 14 wherein said compound is an agonist or partial agonist.

16. A method of modulating inflammation in a mammal in need of said modulating  
5 comprising administering to said mammal a compound of claim 9.

17. The method of claim 16 wherein said compound is selected from the group consisting  
of agonist, partial agonist, antagonist, and inverse agonist.

10 18. The method of claim 17 wherein said compound is an agonist or partial agonist.

19. A method of inhibiting inflammation in a mammal in need of said inhibiting  
comprising administering to said mammal a compound of claim 9.

15 20. The method of claim 19 wherein said compound is selected from the group consisting  
of agonist, partial agonist, antagonist, and inverse agonist.

21. The method of claim 20 wherein said compound is an agonist or partial agonist.

20 22. A method of preventing or treating an inflammatory disorder in a mammal in need of  
said preventing or treating comprising administration of a compound of claim 9.

23. The method of claim 22 wherein said compound is selected from the group consisting  
of agonist, partial agonist, antagonist, and inverse agonist.

25 24. The method of claim 23 wherein said compound is an agonist or partial agonist.

25. A method of treating an inflammatory disorder comprising administering an hTDAG8  
agonist or partial agonist to a mammal having an inflammatory disorder.

30 26. The method of claim 25 wherein said mammal is a human.

27. The method of any one of claims 1-8 wherein the receptor consists of one or more amino acid substitutions selected from the group consisting of:

(a) a substitution of alanine for proline at amino acid position 43 of SEQ ID NO:82;

5 (b) a substitution of asparagine for lysine at amino acid position 97 of SEQ ID NO:82; and

(c) a substitution of phenylalanine for isoleucine at amino acid position 130 of SEQ ID NO:82.

10 28. A compound of claim 9 wherein the receptor consists of one or more amino acid substitutions selected from the group consisting of:

(a) a substitution of alanine for proline at amino acid position 43 of SEQ ID NO:82;

15 (b) a substitution of asparagine for lysine at amino acid position 97 of SEQ ID NO:82; and

(c) a substitution of phenylalanine for isoleucine at amino acid position 130 of SEQ ID NO:82.

20 29. The method of claim 13 the receptor consists of one or more amino acid substitutions selected from the group consisting of:

(a) a substitution of alanine for proline at amino acid position 43 of SEQ ID NO:82;

(b) a substitution of asparagine for lysine at amino acid position 97 of SEQ ID NO:82; and

25 (c) a substitution of phenylalanine for isoleucine at amino acid position 130 of SEQ ID NO:82.

30. The method of claim 16 wherein said mammal is a human.

30 31. The method of claim 19 wherein said mammal is a human.

32. The method of claim 22 wherein said mammal is a human.